Policy & Research Unit - PHN

2.3.6 - Health Care Linkages

Chapter V

HEALTH CARE LINKAGES IN THE THIRD WORLD

Sven Steinmo

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Health care delivery to the Third World's rural poor is often inadequate, inappropriate or nonexistent. No more than 25 or 30 percent of the population of most LDC's use any part of their countries' health delivery systems (Clinton, p. 257) (McGilvray, p. 6). N. R. E. Fendell has written:

> Medicine throughout the twentieth century has been brilliant in its discoveries, superb in its technological breakthroughs, but woefully inept in its application to those most in need . . . the implementation gap must be closed (Fendel in Smith, p. xiii).

This "implementation gap" all too often characterizes the delivery of health care in the Third World. One frequently observes high-cost and high-quality medical care provided in the major cities for the national elites, while the rural communities receive little or no medical attention. Moreover, and this may prove to be a far more important point in the LDC context, the type of medical care we of the industrialized world have come to expect may be wholly inappropriate for traditional societies.

> Long-held maxims about providing rural health care are being proven invalid. All those involved in planning, funding and delivering services have learned that health services designed and implemented from the "top" and "handed down" have often failed to attract villagers' participation or to affect their lives (Clinton, p. 259).

Thus, we see a broader problem than simply the extension of modern medical facilities into the rural periphery. Even if it were feasible to accomplish such a task (and in many, if not most, cases it is not), the advisability of such a strategy is in doubt. The point to be made here is that "health" itself is a problematic concept. Our modern technological orientation has led us to see the medical profession as "producers" and the unhealthy as "consumers" of health. A

more appropriate definition for our purposes of "health" is "well-being" or the absence of sickness. Using this definition, "health care" becomes those activities which maintain or promote "well-being." This, then, does not permit us to delimit the notion of "health care" to simply curative medicine. Our technological orientation has allowed us to forget that the major advances made in "well-being" in the past century have had as much to do with standards of living as with "medicine." These advances have been products of changes in sanitation, housing, clothing, and nutrition. It is a sad and obvious fact that no amount of medical help can save a child dying of malnutrition. It is equally true that though you can rehydrate a child suffering from amoebic dysentery, you cannot "save" all his kin until you remove the amoebic contaminant from their living environment.

The point here is a simple one. "Well-being" or "health" is a product of the socioeconomic environment in which the individual lives (Blum, 1976, p. 9). It cannot, at any price, be purchased from an M.D. "Health," then, is a concomitant of social change, and those who are truly interested in increasing the "health" of the rural poor need to look for those structures which point towards avenues of social change. Gunmar Myrdal puts the issue quite well when he says:

> The standard of health depends on the whole social milieu, especially the prevailing attitudes and it's institutions. Some of the most important reforms in the field of health and education are of necessity social reforms. (Myrdal in Kroeger Plos)

It is precisely the inability or unwillingness of health planners to see "well-being" as a concomitant of social change which has undercut so many well-intentioned attempts to deliver "health care" to the rural poor. Not seeing the connection between "well-being" and social change has been the principal reason Third World health planners all too often support programs emphasizing high-cost curative care which prove to be dismal failures in terms of promoting the rural poor's "well-being."

It is a combination of the curative medicine's inability to reach the rural poor and the immense scale of the rural poor's health problems which have encouraged many international donor agencies (such as USAID, WHO and UNICEF) as well as some national governments to reevaluate the medical-technical orientation towards health. Faced with the reality of painfully small budgets and the staggeringly high cost of training Western-style M.D.'s, these actors are increasingly interested in new approaches to improving health in rural areas. These approaches tend to focus on preventative rather than simply curative medicine and utilize paramedical personnel and/or village health workers. (See, for example, D. Flahault, Gish, 1973, Storm, Djukanovic and Newell.)

We shall describe these various alternatives in greater detail below. But it is enough to say here that while modern medical education is oriented towards delivering curative care, it is unquestionable that the most pressing health needs of the Third World lie in the arena of "preventative medicine." Malnutrition, malaria, gastrointestinal parasites, tetanus, whooping cough, tuberculosis, trachoma, cholera and typhus are not always "curable" in the medical sense. But as the experience of the Western world demonstrates, these diseases are largely preventable. To "prevent" these diseases, however, requires social change at the village level. It is not simply a matter of prescribing pills or giving immunizations. Prevention of the great Third World killers requires a change in the very way of life of the villager. Culture, custom and religion have upheld many unsanitary or otherwise unhealthy practices in rural villages; to change these practices requires intimate communication with, and understanding of, the village. This linkage is often impossible for the Westernized M.D. to attain. The village health worker (VHW), on the other hand, does not have this linkage problem, at least not to the same degree. Rather, the VHW's "linkage" problems

usually arise vis-a-vis the medical profession. At any rate, it is clear that the education of these auxiliaries can be geared to the population served. Indeed this is because the auxiliary should be ideally of the population served.

Linkages and Health

The central theme concerning linkages in the health field which has emerged from our review of the literature is the difficulty of establishing links between the medical profession and local organizations capable of providing health services. Intergovernmental questions about which levels of government and what types of government agencies should administer the programs are largely absent from the health literature. This lack of concern with governmental structural questions in health contrasts with the attention given to those issues in agriculture and public works.

The promotion of new priorities for rural health is especially difficult in this program area because one mechanism for promoting redistribution is not available--namely, local pressure. In other program areas, the poor can be organized to challenge the dominance of elites and these upward pressures can stimulate the creation of supportive national linkages from sympathetic agencies. Whereas poor rural dwellers want water for crops and access to credit and markets, they often prefer curative to preventative health. They may accept the medical-technical orientation and thus not create pressures which will promote preventative medicine or the social changes which will improve their standard of living and thus their health. (See Elliot, p. 3)

It is also important to stress that there is no single "best way" to deliver health care to the Third World. The immense variations among nations necessitate different approaches in different situations. The differences between countries

will determine what is culturally acceptable, economically viable, and politically feasible. Without knowing the specific case it would be useless to deisgn a prescriptive model to be carried from capital to capital.

In this chapter, we shall analyze four health care delivery models extant in the world today; hospital-based, task-force, clinic-based and village-based. We shall focus largely on the two latter models both because we see them as far superior in terms of helping the rural poor, and because they have received a great deal of attention in the literature in the last few years. In the first two models we will focus on linkage issues which pertain to the power and influence of national elites. Here we hope to bring out the importance and weight of these issues on the development of any national health programs. In our third model we shall focus on the linkages between structural units which this model usually attempts to, but rarely succeeds in, accomplishing. And, finally, in the village-based model we will focus on what we see as the most important linkages in this issue area: those between modern medicine and the village. Here we will attempt to describe the problems of establishing "linkages" or working relationships due to social and cultural barrier between traditional society and modern medicine.

Hospital Systems

The first model we shall examine is the national hospital case. By this we mean cases where most, if not all, of the nation's health care budget is spent on large-scale modern hospitals which are usually confined to the major cities. It is important to note that almost all countries (developed as well as developing) fit into this model broadly speaking. This is to say that almost all nations spend an extremely high percentage of their health care budgets on high quality/ high technology care. What is distinctive about the nations which we have placed

in this category is that they do not at the same time make significant investments for the delivery of health care to the vast majority of their populations--the rural poor. Additionally, the reader should note that though we mention only a few countries here, a grossly unequal distribution of health care resources is the norm rather than the exception in most of the third world.

These countries tend to possess highly centralized political systems and for this reason alone it should come as no great surprise that their health care delivery systems are also centralized. Clearly, those who have political power will demand the best health care that their power can buy. This seems to necessarily mean large university-type hospitals. But again, almost all nations have these hospitals. What is different in these countries is either a lack of concern for the politically impotent rural population or--equally realistically--a lack of funds once the large hospitals have had their share. Charles Elliot presents the issue quite well:

> I think it is important to emphasize that the urban bias of health services had a logic (if perverted logic) of its own. It did not result only from a wicked oligarchic plot to hog the largest share of the medical cake (which is a picture some more incautious left-wing critics tend to imply), but from an uncritical application of (basically Western) economizing algorithms to a situation of extreme resource scarcity. If medical facilities of all sorts are in desparately short supply, it is neither wicked nor foolish to deploy them where they are most likely to be used. (Elliot, 1975, p. 3 Contact 28)

Though the motivations for these systems may not be wicked or foolish in terms of national political and medical elites; these hospital-based systems are, according to the Christian Medical Commission, "both ineffective and inefficient." (Contact 16, p. 3) One example of this model is Bolivia. The people of this small American nation have, according to AID (USAID, 5110453), the worst health status of any American nation. It is also (and this is surely no small coincidence) the poorest nation in the hemisphere. In Bolivia virtually the entire budget for the nation's health care system is spent in the University of Medicine and the

large hospitals in the major cities. Even though the Ministry of Health (hereafter referred to as MOH) is charged with delivery of health care to the 80 percent of the populace living in the rural communities, AID estimates that only between two and ten percent of the rural health care needs are being met. Though the University of Bolivia produces 220 doctors a year, virtually all these doctors stay in the big cities or move to America.

But what is most interesting about the Bolivian case is that the problem does not stem from a lack of governmental attention to health. In all, there are 37 public agencies dealing with health care delivery in Bolivia, which contribute to what AID has called "a cumbersome and fragmented centralized bureaucracy." Despite this uncanny number of agencies, there are apparently few linkages between them. Rather, each is concerned with its own constituency and uses its resources to maintain its political support. (The most important agencies are MOH, Social Security System, National Social Development Council, railroads, National Institute of Colonization, National Road Service and Public Works and Development Corps.) Through these groups Bolivia channels $52 million a year for health.

There are few, if any, linkages between the center and rural poor, while at the same time (and maybe for the same reasons) the linkages between urban elites, the medical profession, and government decision makers are very strong. The central problem in this example is not administrative weakness (though this certainly is a problem); rather, Bolivia seems to be a clear case where there is a lack of political will on the part of political decision makers to deliver health care to the rural communities. Though the MOH is charged with delivering rural health care, it is clear from the AID evaluation that their major institutional linkages are with the University of Bolivia. Hence their budget, which is small (remember, a single large-sized American hospital can have a budget larger

than $50 million), is apportioned out according to the strength of the MOH-University linkage. Thus the MOH spends 75 percent of its budget on urban hospitals and 25 percent on rural health care. The orientation of the MOH in Bolivia is to provide high-quality care to the upper and middle classes of society, rather than reduce that quality and spread out delivery. Virtually all medical students are members of the upper class and hence start their education with an orientation towards quality care and not quantity care. Moreover, it has been noted that "no amount of money could induce these people to move into the primitive bush." (Caetano 1980; See also, Ronaghy 1973) Thus, we see here that the social relationship as well as the institutional power of these M.D.'s prevents the development of a rural system in Bolivia.

These problems are not, however, limited to Bolivia. Brazil, for example, is another case which fits this model. What is most remarkable here is that there is a gross oversupply of M.D.'s in most of the large Brazillian cities. In cities such as Rio de Janairo and Sao Paolo the doctor-to-patient ratio is so low that many M.D.'s join the army simply so that they can survive. (Caetano 1980) Still, Brazil suffers from a drastic undersupply of doctors in the vast majority of the country. (Penido, pp. 38-40) Despite this, the Brazilian Ministry of Health continues to allocate most of its budget to the large city hospitals and not to rural health care.

The final case in this section is a reminder that while some Third World nations are turning towards the use of auxiliaries for the delivery of health care, it is far from a universal trend. In fact, most of Francophone Africa which had such systems established while under colonial rule is cutting back the use of auxiliaries. (Note that Algeria is an exception to this trend. See A. M. Laib, pp. 16-25) P. Pene (Lancet 1973) tells us that this move is part of a growing sense of "nationalistic pride." While the nations were colonies, the

French established a two-tiered system with qualified doctors and registered nurses serving the elite and auxiliaries (medicine Africains) serving the black population. (For an historical analyses of the development of medical auxiliaries throughout the Third World, See N. R. E. Feudal World Health Magazine, pp. 4-8.) Since independence, however, there has been a growing tendency to spend scarce national resources on "qualified" doctors and nurses and to eliminate the former "racist" institution. This, as we have shown before, is both a poor utilization of scarce funds and of limited utility in terms of sorely needed preventative medicine. This tendency is by no means reserved to Franco-phone Africa. (See Gish, Lancet 1973, p. 7251.)

In conclusion, the most important linkage in these cases has been between medical elites and national political elites. In some cases the medical elites dominate or control the MOH; in others they have de facto, but not institutional, power over it. Moreover there is usually, if not always in the Third World, a meeting of interests between elite providers of health care and other national elites. The doctors are oriented towards providing high-quality care. This kind of care is almost always technologically oriented, hospital-based and very expensive. Other elites in these countries, for obvious reasons, want high-quality care available for themselves and their families and they have the political power to make sure they get it. (Navarro, 1974, p. 20) This is true for all countries, not simply the few I have mentioned above. What is distinctive about these countries is that they have financed only these urban-hospital systems, while many other countries also finance rural-auxiliary systems.

We have tried to elaborate how linkages--social, cultural and even ideological--between elites at the national level (medical and political) create demand for high-cost care despite the obvious disadvantages in terms of budgets. Moreover, we must conclude that when there are no political linkage mechanisms through which

the periphery can make health demands on national elites, as in South America, the countries' scarce resources are not likely to be spent on the periphery.

Task-Force Interventions

The second model of health care delivery we have examined can be called "task-force" interventions. These are large-scale highly centralized programs which attempt to immunize large segments of the population or eradicate wholesale major vectors in the environment.

Most Third World countries have engaged in mass immunization and rural development plans in an effort to raise the health status of the rural poor. WHO, UNICEF and USAID have often promoted these programs which have had widely varying degrees of success. Smallpox, formerly one of the world's greatest health problems, has virtually been eliminated through these mass immunization programs. Other similar interventions have proved less useful. It is today somewhat controversial as to how far to take these military-style modes of medical care delivery.

The general argument made here is that these programs do not change people's health consciousness nor change the way they live. In other words, this is an extremely expensive mode which does not get at the cause of ill health in rural villages.

D. Banheri presents the most adamant critique of this model which we have read. He states that while these programs (e.g., malaria eradication in India) are initially very successful the very nature of the way they are carried out prevents the development of a "health infrastructure" which can achieve the final eradication.

> This failure has been responsible for a series of setbacks to the National Malaria Eradication Program, resulting in the costly reversion of large segments of the maintenance phase population back to the consolidation or attack phases. Instead of getting rid of malaria once and for all by 1966, as it was envisaged in the late 1950's, 40 percent of the population have yet to reach the maintenance phase. (Banjeri, p. 75)

Another author writes:

> Moreover, the few rare and rapid tours to the bush made by more zealous doctors and nurses are often ineffective, so difficult, if not impossible, is contact between an urban official who arrives unrequested and a peasant who merely sees him come and go. (Fornier, p. 130)

It is interesting to note that these transitory interventions can be largely ineffective even when they are tied to relatively local "community" hospital centers. One such case is described by David Ross in Sierra Leone. (Contact 49, Feb. 1979, p. 2)

Another example which points to the problems of this "hit and run" approach is offered by an AID evaluation team who studied a sanitation project in Guatemala. The original project's goals were to "improve the quality of life of rural Guatemalans by creating sanitary and hygienic living conditions, and by having communities involve themselves in self-improvement projects" (USAID #5200231). This was to be done by building latrines and water systems in various rural communities. It was assumed that this would improve health by providing potable water and eliminating the breeding material (human feces) for disease-carrying flies. Two years later the AID evaluation said:

> Unfortunately, communities are not benefiting to the extent they should from this project. Systems installed have never been revisited by the TRS's. Many faucets leak, creating muddy and unsanitary conditions. Failure to provide community Pilas for washing clothes also creates unsanitary situations since women must either wash in tubs near their homes with no drainage or walk long distances to traditional but contaminated water sources. Indications are that once USAID ceases, programs will deterioriate since GOG will appoint less qualified personnel and not maintain present wage levels forcing local experts to seek employment elsewhere.

> The weakest part of the program, however, has been a deficient educational system. Community members need to be more extensively taught the benefits of using latrines. Most Guatemalans prefer defecating in their fields believing this benefits crops. Until proper sanitation is understood, the use of latrines will continually meet with resistance (USAID #5200231).

These interventions fail when they do not establish and maintain linkages to the village community. While immunization and sanitation programs are obviously important, the means chosen to deliver these services is fundamental. Attempts to accomplish these goals through mobilization of the community have clearly met with greater success, and as one might guess by now, the "village-based" approach is a significantly more effective means of attaining this project-community linkage.

Clinic-Based Systems

The next two sections will describe what are patently "better" approaches to the delivery of health care in the Third World. These are the "clinic-based" and "village-based" models. While we see an obvious distinction between these two models, one does not often find in the literature an elaboration of what each of these models might mean. The clinic system is an attempt to improve upon the traditional hospital-based system by decentralizing the delivery of health care. This model is usually characterized by a network of regional hospitals and village clinics staffed by a wide variety of health personnel, including doctors, nurses, midwives and an assortment of auxiliaries. The village-based model, on the other hand, at least implicitly brings into question the notion of "delivering" health care. As we mentioned before, "health" or "well-being" is much more a product of the social, economic, and cultural environment in which people live than it is a product of high technology (or even low technology) medicine. The village-based model, then, attempts to mobilize the community itself to attack

its own health problems. By creating new community organizations or motivating existing organizations the village-based model becomes involved in promoting social change at the village level rather than "delivering" curative medicine.

Still, there are many similarities in these two models. Both attempt to combat the problems of both the high cost of traditional medical care and questions of "inappropriate technology" by utilizing "auxiliary" or "community" health workers (CHW's). These new health workers have several advantages over doctors. The first is economic; while the education of an M.D. costs over $84,000 at Dakar (Bryant, p. 260), it costs less than $25 to train two village health workers in nearby Niger (Newell, p. 131). Moreover, with this minimal amount of competency-based training, it is highly unlikely that the illiterate village health worker will move to the United States or London, as is the case all too often with Third World doctors. This is a serious and prevailing problem in much of the Third World. For example, in 1965, 50 percent of the graduating class of Thailand University of Medicine moved to the United States immediately upon graduation (Bryant, p. 75). Iran has an annual 30 percent loss to the U.S. (Ronaghy, p. 428), and India usually loses 27.5 percent of its M.D.'s to England or the U.S. each year (McGilvray, p. 16)j.

However, as compelling as the economic advantage of using paraprofessionals, auxiliaries, or village health workers in addition to doctors is, this new type of health worker has several advantages which in the long run may prove to be far more important than simply economics. To begin with, their training, precisely because it is new, is highly manipulatable. This means that the education these workers will receive can be made to best fit the needs of the local communities. Western medical education whose standards are understandably high is often impervious to the needs (medically as well as economically) of the rural poor. The story is all too often told of the ambitious and well-meaning M.D. who in

going from his medical school to the bush finds himself incapable of delivering the care he was trained to deliver. Without "adequate" supplies, equipment or facilities and unable to communicate to the rural villages--who are often socially, culturally, and linguistically completely separated from the M.D.--he goes back to the city to start up a curative-care practice. The auxiliary, on the other hand, is usually chosen from the village itself and is not trained in the use of high-technology medicine. Hence this worker has no (or at least fewer) linkage problems vis-a-vis the community. This allows much more open communication which is often necessary for patient education as well as diagnosis. Sheldon Margen has noted that auxiliary health workers are sometimes better at early detection of diseases such as leprosy than are M.D.'s.

However, though both models utilize these auxiliary health workers, the way in which they are used is fundamentally different. In the clinic-model the village health worker (VHW) is an extension of the clinic. His or her job tends to be to assist "qualified" professionals or to make "interventions" into the village. These interventions hopefully will draw villagers to the clinic or facilitate care for those who will not or cannot come to the clinic. In a village-based system, on the other hand, the VHW is based in the village and can be seen as an employee of the village and not of the clinic.

> The major breakthrough normally comes when the community rather than the clinic becomes the actual focal point of program concerns and activities. Field workers consider their communities rather than their clinics as their primary bases of operation, and the clinic moves to the role of a technical back-up system. Field workers no longer simply promote and deliver on a one-to-one basis, but rather concentrate on building a network of community members who take on the promotional and delivery roles. (Korten, p. 4)

Thus these two models are different because of the nature of the linkages, not because they look different on an organizational chart. In fact they tend to look quite similar. What is different between the two is the relative importance

of which linkages. The "clinic system," as in India, stresses the linkages between structural units in the system. The clinic and/or regional hospital is the basic focus of attention. The "village-based" system stresses the linkage between the village health worker or team and the village. Though clinics are important to this model, the focus of attention is at the village level. The village system is primarily oriented towards "well-being;" the clinic system seems primarily oriented towards "medical care." We must remember, however, that these are not mutually exclusive concepts.

Issue is: what does the village want?

An additional note: It is important to realize that balanced analyses of these systems is very difficult to come by for the obvious reason that either of these systems is such a significant improvement over the conventional hospital system described above that few observer-participants are willing to portray them in negative light. To quote D. Kerton, "The experiences of the newer systems involved are more diverse and it's something of a problem to distinguish between plans and accomplished reality." (Kerton, p. 19) We attempt to highlight the problems as well as the "successes" of these systems in the hope that this will indicate the areas for linkage improvement.

India's history in the health sector, as in all sectors, has been much influenced by its colonial past. In India, like French Africa, there was a two-tier system of medicine at the time of independence. In 1947 there were 30,000 "medical bachelors" and 18,000 medical doctors (i.e., postgraduate education). And, again like French Africa, one of the first major health decisions of the new government was to abolish the three-year bachelor's degree in medicine. However, the new government, due to "political commitments made during the struggle for independence, [i.e.] the provision of health services to the vast masses of the people, particularly those living in rural areas" (Banjeri, p. 73), was forced to expand massively its output of medical doctors. Hence, since that time India

has opened 103 medical colleges with an annual admission capacity of 13,000 and has increased the number of doctors in the country to over 138,000. The MOH has also established an extensive system of national modern Western hospitals, 5,200 Primary Health Centers (PHC's) staffed by qualified doctors and 32,000 subcenters staffed by auxiliaries. (The system ideally is supposed to operate on a referral basis in which a patient who has an illness beyond the capacity of the auxiliary will go to the PHC; if the illness requires it, the patient will then go to a full-scale hospital.) Additionally, the government has--perhaps reluctantly--begun to finance 9,000 ayurvedic traditional Indian health care dispensaries and 195 ayurvedic hospitals with the roughly 150,000 registered ayurvedic practitioners. Thus, on an organization chart the Indian health system would look like a model to be emulated by the rest of the Third World. With multiple, redundant structures, highly trained staff and a genuine national political will to get health care to the rural poor, "success" would seemingly be a foregone conclusion. . . . But it is not.

According to Sheldon Margen, M.D., who has worked with the health care system in India, "The Indian system is a failure." Another analyst, J. A. McGilvray tells us "Each of the five-year development plans has been modelled on this approach and it has failed." (McGilvray, p. 8) The reason for the discrepancy between plan and reality is simply that organization charts do not deliver health care. Though the Indians have developed a strong institutional infrastructure, the individual practitioner's participation and hence the villagers' faith in the system is extremely tenuous. Moreover, the means of communication and referral of patients between tiers in the system is very poorly worked out. Hence, from the perspective of the ill villager who is referred from a rural health post (subcenter) to the PHC, "Why bother? They may walk for days to get there, only to find that the doctor has gone to New Delhi" (Justice 1980).

Thus the linkages between structural units are weak at best.

Two other problems are outstanding. First, the linkages between the practitioner and the villager is extremely weak, and secondly, the link between practitioner and the center (or city) is too strong.

> One of the saddest ironies of the medical education system of India is that community resources are utilized to train doctors who are not suitable for providing services in rural areas where the vast majority of the people live and where the need is so desperate. By identifying itself with the highly expensive, urban- and curative-oriented Western style medicine, the Indian system actively encourages doctors to look down on existing facilities within the country, particularly in rural areas (Banjeri, p. 73).

Eric Ram makes much the same point when he tells us:

> Even today the training of young doctors does not take the realities of the Indian situation into full consideration, and what is taught has little relevance to the social, cultural and economic needs of the majority of the people among whom doctors work."

The results of the inadequate communication between the provider and the patient, or for that matter between the doctor and his staff, are not only the alienation of the patient from modern medicine, but also the alienation of the M.D. from the rural village. Hence there is a powerful tendency for doctors to move to the cities or to the U.S. The urban population of India, which is 20 percent of the nation, has access to 80 percent of the doctors. This, of course, is not unique to India. Obviously it is a problem in the hospital-based systems which we mentioned above, but it is also a problem in many countries which have attempted decentralizing the health care systems. In many cases, as in India, there are real problems in simply keeping the M.D.'s at their health posts. (See, Ronaghy 428, Korten p. 16) Iran is another example where one-half of all the country's 10,000 doctors live in Tehran, while 3,500 live in the other major cities. (Ronaghy, p. 427)

McGilvray elaborates on the problem in India:

> In a recent conversation with the director of Health Services of the state of Mysore in South India, with a population of 39,000,000, I was informed that there were at least 1,000 doctors in the state who consider themselves unemployed simply because they are unable to secure employment in the two larger cities of the state but refuse to go elsewhere because the locations did not match their expectations of what a doctor should do and should earn. In spite of this, I was assured that several of the primary health centers in the state, which should have a complement of two doctors each, still had no doctors at all. (McGilvray, p. 8)

There has been much discussion in India as to how to solve these problems. The solution fought for by the elites of the medical establishment has been to upgrade Indian medical services.

> These foreign-trained doctors have been pressuring the community to spend even more resources to attract some of them back to the country by offering them high-salaried prestigious positions and very expensive super-sophisticated medical gadgets. These foreign-trained Indian specialists, in turn, actively promote the creation of new doctors who also aspire to "go to the States" to earn a lot of money and to specialize. Emphasis on specialization, incidentally, causes considerable distortion of the country's health priorities, thus creating further polarization between the "haves" and "have nots" (Banjeri, pp. 73-74).

The result, then, of this tension between the professional's desire for prestige and "quality medicine" and the politically dictated need for rural care and "social medicine" defines the character of the Indian health service. The "institutional infrastructure" is firmly in place (though clearly still sparse), but the practitioner commitment to providing care in this structure seriously undermines its utility. Moreover, because of this lack of commitment and the "skewed" orientation of practitioners in the field, the goal of preventative medicine is all but forgotten. Those doctors who are out in the field are horrendously overburdened with pressing, if not life-saving, demands for curative care. Clearly, when the demand for immediate care is as overwhelming as it is in these clinics, even those doctors who are "preventative-conscious" are unable to spend the necessary time for patient education, no less for social mobilization.

Thailand is another example of a clinic-based system of health care delivery. Here again we see a carefully worked-out plan for medical infrastructure but poor linkages between providers, the rural clinics, and the population. These rural clincis (PHC's) are the main channel for providing health care to the rural 80 percent of the population. The average clinic would, ideally, serve a population of approximately 50,000 people and cover an area of nearly 600 square miles. The staff of each clinic should number 37, including those manning the various satellite centers. The health team consists of a physician, two nurses, a senior sanitarian, a number of auxiliary midwives, sanitarians and nurses (Bryant, p. 75).

However, as students of administration have come to admit, plans are often poor predictors of reality. Of the nation's 600 districts, only 216 have these PHC's, and of these only 135 have physicians. While the doctor-to-inhabitant ratio in Bangkok is 1 to 940, in many rural areas it dips as low as 1 to 200,000. Despite the fact that Thailand was never colonized, the medical system's orientation towards scientific hospital-based medicine is unmistakable. This in turn encourages the all-too-familiar "brain drain." As we noted above, in 1965 50 percent of the graduating class of medical students immediately moved to the U.S. upon finishing their internship (Bryant, p. 79).

There are also important linkage problems between the community and modern medicine.

> The difference between the inundated use of health services in middle Africa and the light use in Thailand is extraordinary. For example, the difference in per capita out-patient visits is nearly tenfold. (A physician serving a population of 100,000 usually sees only five to ten patients a day. The reasons for this light usage in Thailand are not clear. Clark E. Cunningham has observed that there is often considerable social distance between the government physicians and the people, a distance the people may be unwilling to cross. Or, possibly, the people do not see that effective health care is available at the health centers. They have alternatives--the traditional herbal

> physicians, the priest, the spirit doctor, the pharmacist, the "quack" doctor or injectionists, traditional midwives, friends, and relatives--and they are willing to pay liberally for their help (Bryant, p. 78).

This social linkage problem is especially important when we see that doctors are unwilling to go into the village even though they have no work in the clinic.

Finally, these clinics have problems of communication in their internal organization. Bryant attributes this to the nature of the Buddhist culture. Even though the Thai health plan includes information feedback inside the structure, there seem to be few active feedback loops. Because of the patron-client (or superior-inferior) relationships in this cultural system, "the flow of information is almost exclusively from patron to client" (Bryant, p. 78). The notion of challenge or even suggestion coming from the bottom up is quite alien to this culture. Hence the learning aspect of the implementation process is seriously undermined. (For another elaboration on the problem of patient-doctor communication in Thailand, see Boesch in Diesfeld, pp. 108-122.)

E. K. Kroeger provides us with one of the most penetrating yet simple critiques of what we have called the clinic-based model in his article, "Social Change and Family Health in a Plantation Population." In this analysis Kroeger gives us a description of the "comparatively good health services" available to the poor plantation workers in Sri Lanka.

> At almost every plantation there was a dispensary with a qualified midwife in charge. . . . Besides dispensaries and maternity clinics, a number of plantations had their own small hospitals which was usually run by experienced medical assistants. The hospitals were not of a very high standard, which anyway was not necessary, as serious cases and emergencies could always be brought to the next governmental hospital where general doctors and specialists were available. Transportation was then provided in this case by the plantation. (Kroeger, p. 99)

Additionally, the government and the plantation owners have attempted to upgrade sanitation for these workers. They have built piped water facilities reaching 80 percent of the households and latrines for 67 percent at the time of this study.

Yet despite all these efforts studies show that disease patterns (morbidity rates of a wide variety of disease are examined in this study) and infant mortality rates are extremely high and still significantly higher than the general Ceylonese population. According to Kroeger:

> These poor health conditions of the plantation populace are obviously not due to a lack of health services. More important is the whole socio-economic situation, the poor living conditions, the traditional behavior of the people, and the extremely low standard of education of the labour population.

In sum, what is clearly needed more than health services is social change.

In this discussion of "clinic-based" delivery systems, I have tried to highlight two basic linkage problems -- between the community and the clinic and between the practitioner and the clinic. As with the "hospital" systems of Latin America, much of the problem stems from the professional orientation of "Western" medical education. Thus we see, even with serious national attempts to establish a rural health infrastructure, the social, cultural, and professional orientations undermine its effectiveness.

Now we turn to the "Medex" system, a prescriptive model which attempts to bridge the distinction between "clinic" and "village-based" systems. The key to this model is the auxiliary health practitioner or the "Medex." This individual provides the institutional link between the M.D. and the Community Health Worker (CHW). The creators of this model (most notably Richard A. Smith, M.D.) see this intermediary as essential because the communication gap between the M.D. and the peasant is too great to be bridged under normal circumstances.

Thus this system is a three-tiered model which places doctors at the top of the hierarchy with the community health workers (CHW) in the village and the Medex worker as the institutional link between the two.

The framework for their model assumes six basic premises:

1. Primary health care must be integral to rural development.
2. Radical reorganization of health services is not feasible in most countries.
3. The most effective way to begin organizational change in health is by the development of adequately trained and deployed health manpower.
4. The community health program must be connected to the next larger government structure if a primary health program is to survive beyond its initiation.
5. The auxiliary worker must be connected through an intermediary to the presently established health system. This has two functions: (a) gaining acceptance for the rural worker by professionals and (b) providing mechanisms for supervision, training and patient referral.
6. The program must be seen as one which will extend doctor services to rural areas, not substitute doctors. If this is inversed, you get no help from doctors.

Doctors have two roles in their model: (1) patient referral from less-trained auxiliaries and (2) management and supervision. "This will require retraining doctors in health planning, epidemiology, operations management and evaluation" (Smith, p.23).

The Community Health Worker is the agent of social change, whose role should be communicator-facilitator and promotion-educator. He/she should have a limited curative role, but a high preventative role. The CHW, then, is a

"boundary spanner" who provides the linkage into the community. Dr. Smith and his staff have studied the health systems in 17 different countries and have elaborated on a variety of mechanisms to promote the success of physician extenders. Five of these points seem particularly important to our purposes here:

1. Broad base of support-government policymakers, training institutions, organized medicine and others with vested interest in health care must be brought together in support of the program, else it will wither away.
2. There must be involvement of M.D.s in developing curriculum and teaching of curative medicine. If they are included here, they will be more supportive, i.e. provide a "receptive framework."
3. Workers should have "competency-based training" in rural areas by people with experience. "It is important not to overtrain these people, or they will tend to leave the village."
4. The CHWs should come from the communities they serve. With Medex the location should be determined before he is trained.
5. Evaluation is a learning function and should be carried out on at least two levels. The first is the national or provincial level. Here a panel should be formed consisting of faculty of training institutions, private health practitioners, public health officials, evaluators, statisticians, and if possible health experts from other countries. This panel should ideally be made up of the policymakers themselves but where the national political system does not permit this they can act as an advisory panel.

This it seems to us is an extremely important point. What is being attempted here is both to establish a learning-linkage and to engage national elites in the program and hence secure their commitment.

Secondly, they recommend a "community panel" at the rural health unit level. This panel is to "assess traditional customs and practices affected by health unit activities and the acceptance of the new health practices by the community" (Smith, p.131). Though they do not detail who should participate here, it is clear that local elites as well as Medex representatives and CHWs should be included. Implicit in their discussion is that this level should make policy within the parameters of national or regional policy and should provide an information linkage to the center (Storms makes much the same point on p.27), The most important information in this arena has to do with type and quantity of drugs and supplies.

This point, we should note, is not widely agreed upon in the literature. Foege, for example, argues that the most important information which these local committees can provide upwards has to do with anthropological information. Foege explains that effective health planning cannot leave out the important questions of "What does it mean to be sick? Where do people go when they are sick? Who gives them advice? What is the significance of foods and eating rituals? In other words one must learn the traditions and customs of the people in order to understand their health attitudes and practices." (Foege in Storm, p.31). Other analysts, who we shall discuss later, argue that these village communities should actually be the planners and decision-makers for their health programs.

In sum, the most important linkages in the Medex system are those of training, evaluation, information communication, drugs and supplies. The most unique and attractive aspect of their description is that of the role of the Medex. The Medex is intended to be the personal as well as the social linkage between the modern medical system and the traditional environment of the village. He is both "red" and "expert," to use an analogy, and clearly is intended to

serve the function of "cadre" from the modern world. Moreover, the Medex is intended to be the linkage which legitimizes the system as a whole to the medical establishment. The use of the term "Medex" or "medical extender" is well chosen. It is important to see that from the point of view of the medical establishment, the Medex is not intended to and cannot, in fact, replace the doctor. Actually, the function and even prestige of the doctor are somewhat upgraded in this system.

We have spoken of the Medex model up to this point in a rather uncritical fashion. A few caveats should be added here. To begin with, we have seen only one evaluation of Medex systems in operation (Gridley, USAID 1980). We are therefore obviously somewhat limited in ability to criticize. We must remember, however, that plans, models and charts do not deliver health care. This leads us to our major point of skepticism. That is, Medex is a health plan which appears overly oriented toward organization structure as the crucial variable. We see this as a drawback because the Medex model does not at the same time allow for the redundancies which would help protect it from problems due to the bad linkages (communication or otherwise) which are perennial in the rural Third World. Thus, once set out in the real world we would tend to suspect that this system would be seriously hampered by linkage problems or barriers not foreseen in the model (see Landau). The USAID evaluation by Gridley et al. lends support to this point of skepticism (see Gridley pp. i-iv, 1 and 24).

Village-Based Systems

The next model we shall discuss covers what we have termed "village-based" systems. This system stresses planning and policymaking at the village level rather than (but not to the exclusion of) organizational structures. The first nation to engage in this form of health organization was, of course, China. Today there are over one million "barefoot doctors" (BMDs) in China. This is an especially

remarkable accomplishment given the fact that 1965 was the first year such a program was even discussed. These BMDs are members of their respective communes and work part time in the field with their "comrades" and part time as deliverers of health services.

The most significant aspect of the Chinese system for our purposes is that these BMDs are explicitly intended to provide an institutional link between the center and the periphery. Moreover, due to the strength and administrative capacity of the Party and the social organization of "New China," these "medical cadres" are able to provide a charismatic leadership function in terms of health. Thus these BMDs are both centers for community health mobilization and subtle tools of the national government in the exercise of health policy decisions (see Schurmann, New, Sidel, in Newell and Djukanovic).

Even though the Chinese model has in many ways been the point of departure from traditional models of rural health care delivery experience has shown that this case is unique. Due to the strength of the Party the linkages from the center to the BMD and the BMD to the village are not necessarily "reproduceable" in other Third World settings. Roganhy and Solter (Lancet, p.74) point out in their study on Iran that even the selection process of BMDs or village health workers (VHWs) must be different due to the differences in Iranian culture. "Collective decision making," a central element in the Chinese system, was apparently not easily applied to the Iranian context.

> One cannot easily generalize from this limited experience. Iranians are highly individualistic people with a limited history of cooperative enterprise, whereas the Chinese have a long history of close cooperation . . . . made imperative by intense crowding in the great river valleys. . . . (p.1332)

Thus, they conclude:

> On the basis of our limited experience in Iran, we believe that the Chinese barefoot doctor is not easily transplantable to Iranian

soil and that auxiliary training in Iran must take into account the realities of the Iranian situation. (Ronaghy & Solter, 1974, p.1333)

We shall, then focus on attempts made in the direction of "village-based" health care in more typical Third World settings. The first example in this mode, and probably the most successful attempt at this form of delivery, is in the Comprehensive Rural Health Project of Jamkhed, India (Djukanovic, p. 70-88; Newell, pp.70-91). This project was started by two young Indian doctors (husband and wife) who had received degrees in public health from Johns Hopkins University (this is no small point). Once they returned to a rural hospital in India they began to realize that 70 percent of the diseases they were treating were preventable and that once "cured" the patient almost always returned to the unhealthy environment which caused the illness in the first place.

These two doctors (Mabelle and Rajanikant Arole) first obtained funding from the Christian Medical Commission to set up their "total health care" system. They started with four basic assumptions:

1) Local communities should be motivated and involved in decision making and must participate in the health program so that they ultimately "own" the program in their respective communities and villages.

2) The program should be planned at the grassroots and develop a referral system to suit the local conditions.

3) Local resources such as buildings, manpower, and agriculture should be used to solve local health problems.

4) The community needs total health care and not fragmented care (as is the case in the rest of India, see above); promotional, preventative, and curative care need to be completely integrated, without undue emphasis on one particular aspect (Arole in Newell, p.71).

Their second task was to gain entry into the community. When they first approached, the villagers were hostile, assuming that the Aroles were simply Westernized doctors who would exploit the community. However, the Aroles saw

this initial entry as especially important because they wanted to gain the villagers' commitment to, not just acceptance of, the project. Thus they went to several communities with their plan and chose the one whose leadership seemed most committed to the project goals. Their experiences in other communities varied widely. In one village the community leader tried to sell the "foreign-returned-wealth" doctors land at very high prices. In another village the practitioner of indigenous medicine "successfully prevented any dialogue between us the people" (Arole, 1975, p.72).

Once a village with a sympathetic leadership was selected, these elites were used as the initial entry vehicle into the community. An advisory committee was formed which consisted of elites from all castes and political parties. "Their function is to guide us in health care programs and provide a liaison between the villages and the project" (Arole, 1975, p.74).

They then hired nurses, auxiliary nurse midwives and paramedical workers totalling about 20 people. The community provided the land and built the facilities for the clinic. This was considered very important for it reinforced the commitment between the villagers and the project. Surrounding villages also got into the initial process by providing volunteers and rebuilding roads between Jamkhed and their communities.

In October 1970 they opened the clinic and were immediately inundated with chronic patients. Initially 200-250 patients visited the clinic daily. This number decreased after the "backlog" had been seen. Still the clinic was swamped, which proved to be quite unsatisfactory to the Aroles. Here were those enlightened Johns Hopkins M.D.s and M.P.H.s providing nothing but curative care. But with a good deal of effort they were eventually able to make it out of the clinic and into the village. (Note how different this is from the traditional system in India described above.)

> Popularity and reputation gained in clinical service had to be used as a springboard for launching community health programs. Acquaintances made at the center were useful as points of entry to the villages. A child cured of whooping-cough or tetanus was used as a demonstration case for health teaching in his own village, and the community was motivated to organize a mass immunization program (Arole, 1975, p.5).

This point cannot be overstressed. The Aroles used their proven curative powers to gain the initial linkage to the villagers. They then expanded this linkage to other realms which the villagers would normally be less likely to accept, i.e., preventative care.

Having established the initial linkage to the villagers, they expanded it to other functions. Most importantly, they used their informal contacts to gain information as to the "felt needs" of the community.

> When the project began, the area was facing a drought. We would visit a village in the late evening over a cup of tea just to talk to the village council members and other leaders. These intimate contacts soon made us realize that their priorities were not health but food and water (Arole, 1975, p.75).

Taking seriously their stated goals of "grassroots" decision-making, the Aroles decided to switch the attention focus of their project temporarily to the attainment of food and water. Their success in organizing in these areas became a foundation upon which they could expand back into traditional health services but more importantly into preventative health campaigns. This is to say that the community organization and leadership which solidified around getting food and water could later be used to achieve goals which were not originally high priorities for the villagers.

As this project began to grow, they came to realize that there was a need to link up with the practitioners of traditional medicine in the village. Hence they contacted these providers and invited them to the center. They then

elaborately explained that they did not want to compete with them but wanted to help them by providing them with simple drugs, enhancing their skills and providing facilities for their patients. "In return they were to help us with regard to nutrition programs, immunizations, and the care of patients referred to them" (Arole, p.77, 1975, emphasis added).

The project then attempted to establish two additional linkages to the surrounding villages: the mobile health team and the Community Health Worker (CHW). The health team, consisting of a doctor, a nurse supervisor, a social worker, auxiliary nurse midwife, driver, paramedical worker and village health worker, were to visit villages roughly once a week. It quickly became obvious to these teams that the villagers related far better to the drivers and village health workers than they did to the "professionals" who were not of the same cultural or class background. These "lower-rung" workers, then, were given special training in health promotion.

The team's basic function was to seek out the ill in the periphery. It was apparent to the project leaders that the costs and inconvenience of transportation prevented villagers from coming to the clinic unless they were very seriously ill. (Then it might be too late, or impossible, to travel.) The team could then provide transport for the ill, seek out health information, and give preventative education. (Again note the difference between this approach and the classical Indian clinic system.)

The need for continuous care in the periphery quickly became obvious. For as open as the health team might be, villagers could still resist these weekly intrusions by outsiders. Though they originally intended to send some of their auxiliary nurse-midwives and/or paramedics, they soon found that these people were unwilling to go. (Note here that even the bottom rung of health professionals

resist being "stuck out in the boonies.") Therefore the project decided to get volunteers from the villages to come in for CHW training. This was an unintended, yet major, success.

> A person chosen from the community and trained is readily accepted, and health promotion can be easily achieved through her. The village health worker feels important because of the new role she plays in the village. Having once convinced herself of the various health needs she is able to bring about change much faster than a professional. The volunteer being part of the community does not need a separate house, protection, or special allowances. Since her incentive is not money but job satisfaction her services are not expensive and are within reach of the community (Arole, 1975, p.80).

Each village submits four candidates, usually women beyond childbearing age, and the project leaders select among them. Most of the CHWs are illiterate and receive their basic training two days a week at the center using flash cards, flannelgraphs, and other audiovisual aids. The CHW also gets on-the-spot training during the weekly health team visits.

In the village her duties consist of gathering health information (births, deaths, causes of illness when possible, etc.) and health promotion in preventative health education and distribution of oral contraceptives and condoms. The CHW has a health kit containing contraceptives, simple drugs, dressing materials, eye ointments, etc. She is paid an honorarium of RS 30.00 a month. Food, transportation, and training cost approximately RS 50.00 a month (RS 1.00 buys a cup of tea in India).

There is little doubt that the Jamkhed project has been a great success. It is, however, difficult to factor out how much of this success is due to the unique personalities of the project's leaders and how much is due to project infrastructure itself. An independent team of WHO and UNICEF representatives concluded:

> Several factors are relevant to success. One of the most important is that the project is based on the recognition, particularly by

> the project leaders, of the priorities determined by the community. To the community, health is not a number one priority; agriculture, water supplies, and housing are more important. The project has therefore identified itself firmly with agricultural improvement, acquiring a tractor to be hired out to farmers and providing assistance in dairy and poultry farming and irrigation schemes. In effect, it appears that in such communities, which have a low economic status and per capita income, doctors and health services will need to identify themselves with the community's priorities in order to fulfill health objectives (Djukanovic, p.77).

The second case we shall examine in this category is the national "simplified medicine" program in Venezuela. It is important to note the differences between programs which are instituted nationally and grass roots organizing projects like Jamkhed. The most glaring contrast we shall see is in growth rates. Clearly few national programs that can hope to gain the luxury or full cadre of committed innovative personalities like the Aroles. Though the Aroles performed a great many administrative functions, their personal leadership was used instead of the bureaucratic form of authority.

The Venezuelan case is especially important because it is one of the relatively few cases where the national government has attempted to establish a comprehensive health care system for the rural poor. This point may in itself undermine the goals of the project as well as bring up the question as to whether this can truly be called a 'village-based' system. However, the Venezuelan case does illustrate several important points.

The "simplified medicine program" emerged in Venezuela as a result of the leadership of a nucleus of high-level professionals in the Health Ministry. The initial experiment was conducted in a remote region to overcome the objections of regional medical groups. The results of this experiment and other similar efforts in LDCs were presented to the medical profession at its national meeting and stress was given to the need to extend health services to rural populations which had not been previously covered. Support from the national group was obtained.

The program is linked to ongoing regional health center networks. The program itself aims to deliver certain basic health care "through a cadre of auxiliaries working within a system that ensures continuous training, supervision, and referral" (Gonzalez in Newell, p.178). The auxiliaries attend a four-month training course held in district health centers. The program has gradually been institutionalized as a regular activity of the Venezuelan health services. Supervision by doctors was not found to be sufficient because of a lack of interest on the part of some of the doctors, infrequent visits, and an excess of consultations. So a regular system of supervision by one or more regional supervisors of simplified medicine has been instituted. They "are based in the regional health office and devote their whole time to the supervision of a number of dispensaries" (Gonzalez, p.185). "The supervisor's approach is of the in-service training type; he observes the auxiliary on the spot, corrects his errors, and completes his instruction" (Gonzalez, p.186).

Gonzalez concludes his excellent analysis of the development and growth of the Venezuelan system with several important points. In addition to stressing the success of the village health workers in terms of integration into the community and the medical system he repeatedly stresses the importance of "support, supervision and referral" (p.189). But the most telling argument he makes has more to do with the community than it does with medicine.

> It is axiomatic that the goal is to encourage local communities to play the most active role possible -- in other words, to obtain community involvement. Experience has shown that this ideal cannot be achieved within a short time. On the contrary, it demands a great deal of perseverance and patient educational and promotional efforts, which will, however, achieve little if at the same time other elements of equal of greater importance than health care for the improvement of the overall status of those communities are lacking. These include changes in land tenure systems, improved housing, increased agricultural output, and tax reforms. In other words, no community involvement for health can be expected from communities in which the economic substratum is very small or even negligible. (Gonzalez, p.190)

This point is gaining support in much of the primary health care literature. For example, Behrhorst makes a very similar argument in her description of the Chimaltenango development project in Guatemala (Behrhorst, Journal of Tropical Pediatrics and Environmental Health).

A particularly significant aspect of the "simplified medicine" plan is that it received the blessing of the Venezuelan Medical Federation. We must remember that despite the seeming logic of a system which extends the reach of modern medicine, no other Latin American nation has implemented such a plan. Even though Guatemala developed a similar approach, their medical association vetoed it. The obvious question is: why the difference? Obviously, the historical structure of rural care in Venezuela was important but it was far from unique in the Third World. What seems critical was the existence of a School of Public Health (most countries have no such institution; this function is supposedly carried out by the medicals schools). If our earlier argument about the orientation of the medical profession and its impact on national policy is correct, then clearly the existence of other professional elites with different perspectives (i.e., public health) should also affect national policy. Moreover, since a high percentage of public health officials are M.D.s, it is reasonable to expect that some of this orientation could filter back into the "medical" establishment. If this were the case, this informal linkage may have been the single most important factor determining the successful development of "simplified medicine."

Clearly there is a need for closer examination of these points. It seems inevitable that a better understanding of how and why Venezuelan elites chose this route will shed light on how other nations might be encouraged in this direction. Newell, Djukanovic, Blum and many others argue that innovative national systems are eminently more cost-efficient and effective than specific

donor-sponsored projects. If this is true, then we need to understand better what kinds of elite linkages will encourage the development of innovative health programs at the national level. Moreover, as is probably obvious, even if donors step in and set up a program, a commitment from national elites is essential for the program's continued success (see USAID, #5200230). Still we must be aware of the fact that this in itself may present problems. The major criticism of the Venezuelan system up to this point is that it too is becoming overly "structured," and hence rigid and removed from community decision-making. The point here is that the balance between too little supervision and too much outside control is a very difficult one to strike.

This point is illustrated exceptionally well in an article describing the Klampock community health project in Central Java. Here even after two years of efforts to bring the community into the decision-making process the project director said:

> The community only participates when we ask it to. This type of participation has no firm roots in the community and will last only as long as we are there to maintain it. (Hendrata, p.3).

In the director's view the principle problem in Klampock had been too much input from the outside. Still, for a modern intervention into traditional society to sustain itself it must have support (linkages) from the modern world. It simply does not work to give basic training to a villager, send him or her back into the village and expect him to hold onto what he has learned -- unless you provide continuous support for this "boundary spanner." In organization theory terms, the external unit, without continuous linkages to the center, will establish linkages with the environment to the point where it may lose its original "purpose" (e.g., T.V.A.) On the other hand,as we pointed out

earlier, too strong a linkage to the center tends to stifle the essential ingredient of community participation in decision making.

We can understand the importance of this point only if we remember that these interventions involve social change. It would be the height of Western chauvinism to assume that these traditional peoples will drastically alter their lifestyles simply because some Western professionals told them it was "unhealthy." Instead this social change process must take place slowly and developmentally. As we have seen with the Jamkhed project, the initial intervention must be one which proves its worth via curative powers, and only then can the more difficult tasks of health promotion and prevention be tackled. Thus the village health worker must establish his/her worth in the community and receive continued support and education in order to promote the social change cycle.

A variety of important points brought up by these experiences are highlighted in another attempt at community based health delivery in the Philippines. Sr. L. Barrion describes three successive attempts at establishing a viable program in the Makapawa district. While the structure and performance of the third and most successful attempt are interesting we shall instead focus on the reasons for the failure of the first two programs. The weaknesses of the first attempt are listed as 1) Inadequate social preparation of the communities. This had a variety of maleffects: a) the basic principles of the "community based" program were ill-defined and hence not understood by the community itself. b) As a result of this the roles of the community health worker (CHW) and the health committees remained ill-defined. c) The program failed to deal with "health" in the context of the economic, social, cultural, and political structures of the community. And d) the CHWs did not necessarily have leadership potential. The second major weakness of this program was "a fixation on health

service activities." The basic consequences of this was that the program did not get to the "root causes" of illness in the community. Curative care became the operating norm and "health care (was) still seen as a dole out." Finally, Sr. Barrion tells us that the program remained "staff and leader-centered." This he tells us resulted in little commitment from the community, and a dependent relationship by the villagers towards the health project.

The next program which was set up, then, tried to account for the problems of the first. In this case the focus was to decentralize the organization of the project and also to enter the community more as a religious service than a specifically "health" service.

These efforts however resulted in their own disfunction. First, because there was only one "Community Organizer" (CO) per area, the CO tended to develop "a little kingdom" and the community became dependent on the CO. Secondly, because the project was not introduced as principally a "health" project, a long process ensued before "health" was voiced as a need, thus wasting health expertise. (One should note that this is a point of major controversy in the field; see Berhrost, and Storm.) Thirdly, Barrion tells us that what community participation was received tended to come from the upper stratum of the community, thus undermining the goal of "grass roots" of the project. (For similar point see Ranoghy, 1975.) This in turn resulted in the needs of the very poor not being articulated and hence not met. Finally, the decentralized nature of this attempt fostered a lack of coordination (read poor linkages) between subunits of the project. The result, then, was that the CHWs received too little supervision, and the health centers did not receive adequate medicines.

The failures of these two Makapawa projects, then, point out some major obstacles to the establishment of a "community based" health program. It seems

to us (without having firsthand experience with the project) that the problems in each of these projects can be seen as having two roots. The first program, from inception through implementation, was based on the "insight" of the program planners, not the community. The second attempt failed because its motive force was the CO, not the community. These cases highlight problems in both a centralized and decentralized approach to implementing community programs. What we see here is that even though these actors had the interest of the community in their hearts...this is not enough. The problem is not one of defining the community and its interests, but rather the problem is finding mechanisms which facilitate the communities own self-definition and the articulation of its own interests. Sr. Barrion concludes with these insights:

> There is no hard and fast rule in the implementation of a CBHP* if it has to be people-oriented rather than programme-oriented. Instead, the programme must start at the present level of the people and respond to their needs in order to become relevant and acceptable to them. Failure to do so results in the people viewing the health programme as a commodity they can use in time of sickness or in an emergency. Many tend to feel and think of it, particularly the preventive aspect, as an outside imposition being forced on them rather than a help. Such programmes only create much dependency. What is important, therefore, is that the various processes employed are periodically evaluated and given direction. These evaluations, shared with other interested groups, will help them in their own search for a CBHP that is truly by and for the people. (Barrion, p. 9); (See also McGilurdy, p. 14)

Community Participation?

The major problem we have had when examining the literature on "community" health programs is that it is rarely if ever specified what "the community" is. While we, like most authors concerned with this subject are obviously in favor of this "community" based approach, we do not see that, once the approach is adopted, all our implementation problems will be solved. Quite the contrary,

*Community Based Health Program

we would argue that when this approach has been adopted a whole new set of problems open up. The first of these problems is defining "the community." Do we mean everyone in a particular village or district? Or do we mean just the poor?

The problem with defining the community as "everyone" does not really become apparent until we begin to grapple with the issue of "community organization." Almost all villages have some form of social and political "community organization." Moreover, the local elites by definition dominate these organizations. While there are cases of more or less egalitarian social and political structures in rural communities one would be naive at best to assume that all traditional village elites are intrinsically more "socially conscious" than are elites in a modern setting. The experiences of rural cooperatives around the globe demonstrate that local village elites can, and often will, use "foreign" programs for their own betterment irrespective of, and sometimes to the detriment of, the local poor. (See Peterson, Chapter II.) What, then, is to prevent these same elites from using their power and influence in the community to direct the "village health committee" and/or "community health worker" towards the delivery of curative care--which they can dominate or get the most benifit from--and away from preventive care? Moreover, "social change," as we and others have said before, mandates a change in the social and economic well-being of the poorest segments of the village. The disappointing results of the "basic needs" approach to rural development draws attention to the difficulties in accomplishing this end. This difficulty is in no small part due to the ability of local elites to dominate "community" organization and manipulate the organization's goals to meet the elites ends. (See Ronaghy Lancet, 1973.)

Additionally, several analysts have pointed out that villages are often composed of several "communities" which can be ethnically, culturally, linguistically, and developmentally quite distinct. (See, for example, Gridley, p. 31 or Ronaghy, p. 78.) Moreover, the Indian experience highlights the point that the divisions in these villages may be highly inegalitarian. (We cannot assume that "democracy" or "equality" is someohow sketched into the subconscious of the world's poor.) The problem, then, is Can you have a "community organization" which will speak for those elements which are at the bottom of the social hierarchy? Perhaps, a more viable solution is to have several such organizations in a village where there are several "communities." At any rate, an across the board solution is not adequate; a much closer look at what "the community" is is clearly needed in each individual case.

Many authors have pointed out that the primary felt need of the rural poor is certainly not preventive medicine--it is doubtful that even curative health care is high on the poor villagers' priority list.

For example, Carroll Behrhorst, M.D. who participated in a community health project in Chimatenango, Guatemala, writes that one of her first problems was to realize that the community did not necessarily want the things which she was trained to do. "We think they need triple vaccine and more protein in their diet, and while it is true that they need these things, they are probably much more interested in, and need other things altogether." (Behrhorst, p. 296, 1974.) Dr. Behrhrost argues that the priorities of the Guatemalan rural poor with which she has come in contact are social and economic injustice, land tenure, agricultural production and marketing, population control, malnutrition, health training and curative medicine. "You notice that I put curative medicine at the bottom, which is where we regard it on our list of priorities." (p. 296)

But the very notion of village-based health care implies local planning and participation. Does this mean that we must abandon hope for this idealistic notion of decentralization? Not really...rather it necessitates that we take a more realistic approach towards both what we aim to accomplish and how we attempt to do so.

All too often the literature on primary health care uncritically heralds the benefits of "community" participation. Writers like Arole and Behrhorst claim that the crucial factor in the success of their programs has been this "community participation." While we do not mean to denegrate these obviously progressive programs we do feel that a much closer examination of what this participation entails is desperately needed.

Clearly, the training of the village-health worker can be scaled such that the threat of elite usurpation is minimized. The VHW can be trained for health promotion, health education, preventative medicine and simple curative tasks. Hence the "goods" he/she has to offer are inherently more of a "public" and less divisible nature. Still, while this is a commendable and by no means easy task to accomplish, it does not get to the root of the health problems of the rural poor.

The major flaw in simply scaling down the technology and/or quality of health care delivery for rural villages is that it is still <u>delivering</u> health care. This is the problem we have seen in the clinic-based approach and the principal cause of failure in the first attempts in Mukapawa Philippines. We only hope to suggest here that the "village-based" approach--which we clearly favor--needs closer examination before it is wholesale applied around the globe. Just as planners saw the rural cooperatives as the cutting edge of the "basic needs" approach only to discover many years later some basic problems; community

health care is today taking on somewhat of a faddish element. WHO, UNICEF, USAID, CMC and many other agencies are now apparently looking to implementation strategies for this new "primary health care" alternative. Again, this model is unquestionably more "appropriate" than the hospital and task force models that we have described. On the other hand, little is really understood in terms of the processes of community organization and village participation other than a few cases led and described by a few highly motivated, altruistic and charismatic individuals. An exceptionally difficult question needs to be asked: Do these cases in fact represent true village participation in health planning and organization? Or alternatively, are they in reality cases of villagers accepting the ideas spawned, pushed by largely dependent upon professionals? Only once we have come to a better understanding of this issue can effective programs be designed on a large scale. This is because affirmative answers to either of these questions implies entirely different planning strategies. If we find that the second alternative is in fact the case, then we need to discover methods to find and train this type of motivated professional. If, on the other hand, we find that there are strategies for the development of viable active decision-making "community organizations," which are not dependent on altruistic outsiders, then these strategies should be implemented.

Our final comment here has to do with the latter approach. The problem with it is that it is not easy to let someone else plan. As one Kenyan M.D. has noted:

> In theory everyone wants to support community participation but when it comes to the point, they only want it as a peripheral part of a health program. They do not see that to have real community participation, you cannot draw up a definitive program in advance." (Black, p. 20.)

If this point is taken seriously then the government and/or donor agency must emphasize facilitative linkages rather than regulative linkages. (See Leonard, Chapter 1.) Because this type of decentralization implies a great deal of local variation, no international program can be definitively described. Our search of the literature does, however, lead us to some suggestions as to the general nature of these facilitative linkages. It is to this which we shall now turn our attention.

Linkages

This analysis looks at the linkages between modern medicine and the rural poor of the Third World, attempting to go beyond the obvious fact that they do not mesh well and discuss more than the communication barriers between modern M.D.s and peasants. By analyzing a series of innovative programs of primary health care delivery, we have explicated various linkage mechanisms which are more effective means of promoting well-being in the village than is classic hospital-based medicine.

Keeping in mind the very important caveat that a particular nation's political setting and stage of development will define the specifics of any successful program, we conclude with some general comments about linkages.

1. Our examination of various health care delivery systems brings us to the same conclusions that Uphoff and Esman have come to in their studies of rural development. Rural well-being, in this case, is best promoted when there are both strong local organizations and effective links between them and national agencies which can support them. Neither rural development (i.e. social change) nor its concomitant "well-being" can be "delivered" to a passive population.

2. The most important point this study has uncovered is that there must be a linkage between modern medicine and the traditional village in the form

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2. The most important point this study has uncovered is that there must be a linkage between modern medicine and the traditional village in the form

of an intermediary. Whether this intermediary is called an auxiliary, extension worker, village health worker or cadre, case after case demonstrates the inability of Western medicine to have more than transitory contact with the rural poor without such an intermediary. The most obvious reason for this is simply an economic one. Most Third World countries do not have the resources required to train an "adequate" number of doctors and to give them the incentives (facilities, salaries, drugs and supplies) necessary to sustain the M.D.'s presence in every village. The second reason is one of culture. M.D.s seemingly always come from the upper-middle or upper classes of their countries. This in itself presents immense barriers to communication between the villager and the doctor. But combined with the training and socialization process in medical schools which inevitably is oriented toward high-cost curative care, the M.D. is often incapable of delivering more than curative medicine, for he is unable to affect the community organization or help facilitate the process of social change.

3. Having introduced the notion of auxiliary as intermediary, we see that we actually have two linkage questions rather than just one. That is, now we can discuss linkages between the intermediary and the medical system and the linkage between the intermediary and the village.

The strength of the linkage between the auxiliary and the rest of the medical system and the linkage between the intermediary and the village may be somewhat inversely related. There is clearly a tension between the notions of strong medical supervision or evaluation of the auxiliary and the notion of local control over health policy. The Jamkhed project points in this direction. There we saw that the project itself altered goals according to the felt needs of the community. It seems likely that, had the linkage to the medical establishment been very strong, this sort of local innovation would have been impossible.

However, in the absence of "leadership" at the intermediate level, the center must establish relatively firm linkages to the intermediary. This is not to say that the dilemma above is false, rather that Jamkhed may have been a rather special case. All other cases we examined which used intermediaries stressed the importance of continued linkages of evaluation and supervision. This linkage is a subtly coercive one.

The simpler the task, the less central "control" is necessary. But this does not mean supervision or guidance can be ignored. Still, if drugs and procedures are quite basic, there is less need to insure against misuse (through elite usurpation or poor allocation by the auxiliary). The less developed and/or the lower the administrative capacity within a nation, the more basic the training and drugs of the auxiliaries should be.

4. There are a variety of linkage mechanisms between the center and the periphery in health. It may be helpful to list them, divided in terms of linkages on both sides of the auxiliary.

Center to Auxiliary

Training (both initial and continued)

Instruction manuals

Medical kits

Transportation

Continued supervision

Periodic evaluation

Drugs (see O. Gish, 1979)

Village to Auxiliary

Selection

Policy committee - (set program priorities)

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Selection

Policy committee - (set program priorities)

Pharmacy (i.e., drugs)

Financial support (see Zschock, in Storm)

Facilities

Gifts (not necessarily but this is often the practice)

5. In this chapter we hope we have both sensitized the reader to the meaning of "community-based" and highlighted some of the techniques which have been used to facilitate this development. Community-based health care cannot be "delivered" by M.D.s who come from outside the community and are not intimately familiar with the local language, customs and culture. Rather, this term implies the mobilization of local resources towards the betterment of the local health status. This, however, as we have seen, does not happen in the absence of linkages to outside organizations. "Linkages are the mechanisms by which one organization is tied to or attempts to influence another." (Leonard, Chapter 1) Without these linkages what little health-oriented community organization does arise will tend to emphasize curative care. This curative care will tend to be focused on the local elites and not the local poor. The major health problems for the rural Third World cannot be "cured" by medicine. They are instead problems which evolve out of the style of living, culture and customs of the villages. These health problems can be eradicated only through preventative medicine and equally importantly through social change. It should, then, be the goal of those agencies interested in promoting the well-being of the rural poor to use their linkage tools (the intermediary, auxiliary, village health worker or Medex) as manipulators of the agenda of the local health organization. This is to say that the CHW should be well trained (or even indoctrinated) to the value of preventative medicine as well as the techniques of how to provide it. Again, the local organization--which must include local elites--is necessary so that there is something to be

manipulated. The AID experience with piped water in Guatemala illustrates the point that much more than physical alternations are needed to promote well-being. And the Jamkhed project illustrates the importance of bringing in the local leadership to facilitate the villagers' acceptance of new ideas and even new styles of living. As we said before, "leadership is the art of using and manipulating this institutional heritage to make decisions, legitimate those decisions and mobilize resources for their execution." Thus, by including and persuading the extant leadership in the village as to the benefits of preventative care and other social changes the program can make significant leaps forward with the minimum of fiscal expenditure. Make no mistake, however, this is an extremely delicate task.

6. Finally, we have devoted little time to a discussion of linkages between structural units in these health systems, e.g., rural clinic to regional hospitals, because these linkages appear to exist only on paper. While every system studied has an organizational chart stating that patients should be referred from one level to the next...in only case which we have studied does this actually happen (Jamkhed Project). People go to the facility nearest them whether it is the village health worker or a big city hospital. There are a variety of reasons for this: e.g., these countries often have very poor transportation networks, the villager is reluctant to leave the village especially when ill, leaving the village means loss of income, and limited training of auxiliaries or paramedics means lower quality care (than M.D. care), which in turns means the inability to diagnose unfamiliar diseases. Hence the auxiliary will often not know when he/she misdiagnoses an illness.

The Jamkhed project is worth noting here because it is an exception: cases too complex for the auxiliary are brought to the attention of the doctor

during his/her weekly visits. If there is a need for referral the doctor and the health team take the patient back with them. The linkage is direct and simple, so it tends to work better than when the problem is simply left to the patient. (Those of us who have been referred by a G.P. to a specialist and have not gone for reasons of cost or time know this problem well.)

Conclusion

In our introductory chapter we stated that the success of program implementation depends on four variables: A) the program's vulnerability to inequality; B) nature of local elites and their interests; C) nature and variability of interests among national agencies; and D) distribution between national and local organizations of the capacity to meet the program's technical and administrative requirements.

Our examination of the various health care delivery modes most often used in the Third World illustrates these points. (A) As we have seen, health care as traditionally delivered, like agriculture and public works programs, is highly susceptible to inequality on two levels. First, because of the high cost of modern curative care, modern Westernized hospitals consume a very high percentage of the LDCs' health care budgets, often leaving virtually nothing for rural health. Even at the village level, however, traditional type "medical care" is susceptible to inequalities which may hamper the long-run success of the program. For example, if high-cost and highly specialized drugs are available, often what little money the village has to spend on drugs will be used to finance "the best" for those villages with "the most"--power, resources or influence.

The point here is that curative medicine is consumed by the individual, rather than the community. It is reasonable to expect, then, that those with power at the local level will be able to ensure that they are treated first.

This leads to the next point, which is that demand far exceeds supply. Even in the modern industrialized countries of the West there seems to be no end to the demand for medical care. This problem is amplified at the village level many thousandfold. The reason for this, of course, is that quality of care can be constantly improved. At the village level this means that the benefits for the few will be increased rather than spread out to the many. Finally, the delivery of high-quality medical care requires highly trained medical practitioners, which in most of the Third World simply do not exist in adequate numbers to meet the need. Moreover, highly trained practitioners are often unwilling to move into the bush and be separated from their home and community.

On the other hand, the benefits from "community-based" health care which focuses on low cost-low technology-preventative care are much less divisible and more widespread. Moreover, because it is low cost and low technology, health workers can be trained in much greater numbers so that the supply can come closer to demand. On the preventative side, since it is an indivisible "public good," the supply-demand equation loses much of its relevance.

(B) The nature of elites and their interests is clearly demonstrated here. The "successful" program is one which brings the interests of the local elite into some degree of harmony with the poor. Again preventative care is an obvious example. Additionally, as Jamkhed points out, by incorporating the local elite one stands a better change of mobilizing the community as a whole.

(C) We cannot overstress the impact of national agencies on the long-term success of any health program. (See Kerton, p. 20.) Without firm commitment of the MOH and the national medical association, the programs are doomed to either total dependence on a donor agency for support, training and financing or total failure. Unless the national government or some agency is prepared to

commit itself to a "rural-health" or "simplified medicine" approach, the donor is best advised to spend its resources elsewhere. (We must remember that in a very high percentage of Third World nations the MOH and/or the medical association are not willing or even interested in altering their approach to health care.) (see Ugalde, p. 1-7.) For this reason we are particularly interested in the establishment of public health agencies and schools throughout the Third World.

(D) Rarely do the technical or administrative capacities exist in an LDC which are sufficient to meet the needs of the rural poor's health problems. Though there are sometimes (though far from always) enough doctors to begin training and supervising auxiliary health workers, these doctors are themselves almost never trained in management--or for that matter public health. Additionally, and of at least equal importance, rural villages are generally not organized politically in a manner which will readily facilitate the extension of preventative health care, etc. In these cases such organization must be established to provide a continuing linkage mechanism between the village and the external health care establishment. In sum, then, for the program to succeed it needs viable linkage mechanisms between a committed national government or its health agencies and an organized administrative body at the village level. Simply put, "it takes two to link."

Epilogue: Social Change

Here we will consider the tension between "providing" health care to the rural poor and social change. As argued in the first section, "health" or "well-being" cannot be bought from an M.D. (or for that matter, from a CHW). The point, again, was that "well-being" is a product of social change which is only in part affected by medical care. Nutrition, housing and basic sanitation

are far more important in promoting longevity, etc., than is medical technology. (See Berliner, p. 180.) But...the real question is, How long do you promote social change? Indeed, can we (the Westerner or donor) promote social change?

Frankly, what is most appealing about the "village-based" models we describe is that they demand community organization and community participation in decision-making. But they also demand linkages to the center, without which the program will flounder. Thus the community organization is to make policy within the parameters of national or regional policy. Moreover, through training, retraining and supervision the implicit notion is that the community organization will have its agenda manipulated by the center, or at least by the intermediary. In fact, we would argue that the whole point of this model is to provide a linkage so that the community's agenda can be manipulated. We must remember that almost all peoples, no matter how remote, have providers of health care--witch doctors, herbalists, spiritualists or quacks. What we are saying is not that we want to provide the rural poor with something they want but do not have, but rather that we want to change their felt needs so they will want something different from what they now have. We want to replace some aspects of traditional health care with modern health care which includes modern notions of sanitation and preventative medicine. This is a process of social change.

We have seen how programs of placing clinics in the periphery (as in India or Thailand) or building water systems and latrines (as in Guatemala) have been failures. They have failed because they have induced no social change. These technologies are inappropriate when there is no concomitant social change.

If the CHW or Medex or whatever is to be an agent of social change, his or her role must balance between control from the top and participation at

the bottom. He/She must be a cadre. The only way we see of striking this balance is to give the CHW both technical training and some degree of ideological indoctrination in favor of the betterment of his/her community. It must be made clear that this "betterment" will occur with preventative medicine. This is precisely what socialist party systems have been so successful at doing. Once "indoctrinated," the CHW can work to channel local participation in the direction of his/her training. It is important to see that the demands made on the CHW by villagers will be for curative care. Only after manipulation of the villagers' felt needs will there be much interest in preventative medicine and sanitation. This manipulation can come only after the CHW has established his/her worth in terms of curative care. On the other hand, the demands made on the CHW by the medical system will be in favor of preventative care. Ultimately, then, since this end of the linkage is doing the manipulating, they must be sensitive to the CHW's dilemma. (See S. Bedaya-Ngaro, p. 26.)

We close with an old Chinese poem:

Go to the People
  Live among them
    Learn from them
      Love them.
Start with what they know
Build on what they have;

But of their best leaders
  When their task is accomplished
    Their work is done
  The people will remark,

"We have done it ourselves."

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